

### Abstract

A process for producing a membrane electrode assembly for fuel cells containing a polymer electrolyte membrane having a first and a second surface parallel to each other. The first surface forms a firm composite with a first catalyst layer and a first water repellent gas distribution layer and said second surface form a firm composite with a  
5 second catalyst layer and a second water repellent gas distribution layer. The catalyst layers are prepared by using inks containing electrocatalysts, one or more solvents, proton-conducting ionomer and optionally water repelling agents and pore-forming agents. In the process the two catalyst layers are applied to or contacted with the  
10 respective surfaces of the polymer electrolyte membrane successively, wherein during the application or contacting process to one surface always the opposite surface of the membrane is supported.